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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/587,315

07/26/2006

Hiroshi Yamada

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EXAMINER

VAUGHAN II, JUAN E

ART UNIT

PAPER NUMBER

1795

MAIL DATE

DELIVERY MODE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/587,315	<b>Applicant(s)</b> YAMADA ET AL.	
	<b>Examiner</b> JUAN E. VAUGHAN II	<b>Art Unit</b> 1795	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 January 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>See Continuation Sheet</u> .                                  | 6) <input type="checkbox"/> Other: _____                          |

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :07/26/07;09/24/07;11/28/07;12/17/07.

### **DETAILED ACTION**

1. This is the initial Office Action for the Photosensitive Resin Composition For Printing Substrate Capable of Laser Sculpture application filed January 26, 2005.

#### ***Priority***

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

#### ***Claim Rejections - 35 USC § 102/35 USC § 103***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-20 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over ISHIZUKA et al. (US 2003/0224281 A1).

a. ISHIZUKE et al. disclose a planographic printing plate precursor containing a photosensitive composition. With respect to claim 1, ISHIZUKE et al. disclose a phenol resin (resin) having a urea bond (polymerizable unsaturated group) in the main chain (abstract). The phenol resin, represented by general formula (A), has a number molecular weight of 500 or more ([0065]). The photosensitive composition also includes an ethylenically unsaturated compound (organic compound) ([0068]). Examples given for the ethylenically unsaturated compound and meeting the limitations of the organic compound (b) include monofunctional (meth)acrylates, urethane acrylates, polyester acrylates, and epoxy acrylates. These examples include preferable examples in paragraphs [0063-0064] of present application, and therefore meet the limitation of a molecular weight less than 1000. Further disclosed is the phenol resin containing a silyl ether (organic silicone compound) ([0048]). Based on general formula (A) ([0065]) and the teaching of the phenol resin being present in the amount of 5 to 95% of the photosensitive composition ([0067]), including the silyl ether is present within the range of 0.1-10 wt % of the photosensitive resin composition.

b. With respect to claims 2 and 3, the organosilane of ISHIZUKE et al., represented by  $-(OR)_m$  when R equals  $-Si(R'')_3$ , R'' is a monovalent organic group, and m is 1, meets the limitations of formula (1) in present application when in formula (1) of present application R equals 3 cycloalkyl groups, p is 2, r is 0, and x is 0 ([0066]). Thus, as it relates to claim 2, when structures are substantially identical to that of the claims, claimed

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properties are presumed to be inherent. (MPEP 2112.01) Because the silyl ether of ISHIZUKE et al. meets the limitations of formula (1) of present application, silyl ether will also be liquid at 20°C.

c. With respect to claims 4, 5 and, 6, in reactions (II) through (X) disclosed by ISHIZUKE, the silyl ether of the phenol resin is represented by  $-(\text{OSi}(\text{R}'')_3)$  (page 4) and  $\text{R}''$  is a hydrocarbon having one or more substituents which may be an aryl group as claimed ([0059]). As it relates to claim 5, the substituents of  $\text{R}''$  may also be a methyl group with substituents, which meets the limitation of a carbinol when the substituent is  $-\text{OH}$  ([0061]).

d. With respect to claims 7-10, ISHIZUKE et al. disclose the use of two or more radical polymerization initiators ([0099]). The initiators include acetophenone compounds, meeting the limitation of degradable polymerization initiators, and benzophenone compounds, meeting the limitation of hydrogen extraction polymerization initiators ([0099]). Acetophenone compounds also meet the limitations of compounds having a site functioning as a hydrogen extraction photopolymerization initiator and a site functioning as the degradable photopolymerization initiator as disclosed in claim 10.

e. With respect to claim 11, because the phenol resin of ISHIZUKE et al. meets the limitations of the resin of present application, the phenol resin will also be liquid at 20°C. When structures are substantially identical to that of the claims, claimed properties are presumed to be inherent. (MPEP 2112.01) Additionally, the addition-polymerizable ethylenically compound (organic compound (b) comprises 2 or more unsaturated groups including urethane acrylates (urethane bond) and polyester acrylates (ester bonds).

f. With respect to claim 13, as discussed above in reference to claim 11 and as disclosed in present application ([0061]), when the resin is a liquid at 20°C, the photosensitive resin composition is also liquid at 20°C.

7. Claims 12 and 14-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over ISHIZUKA et al. (US 2003/0224281 A1).

a. With respect to claim 12, ISHIKUKZE et al. teaches the coating solution (coating layer) applied in amounts of 10 to 100 mL/m<sup>2</sup> ([0154]). Because the photosensitive composition of ISHIKUKZE et al. meets the limitations of the photosensitive composition of present application, any range of the coating layer thickness would be an optimization thereof. (MPEP 2144.05) The amount of coating solution directly affects the coating layer thickness. The coating layer thickness is therefore optimizable.

Further, ISHIKUKZE does not appear to disclose a photosensitive resin composition having a haze and would therefore meet the limitation of having a photosensitive resin composition having a haze of 0 to 70%.

b. With respect to claims 14, ISHIZUKA et al. disclose a planographic printing plate substrate (laser engravable printing substrate) coated with a coating solution prepared by dissolving the photosensitive composition in an organic solvent ([0141,0149]). Based on general formula (A) ([0065]) and the teaching of the phenol resin being present in the amount of 5 to 95% of the photosensitive composition ([0067]), it is obvious to one of ordinary skill in the art that the silyl ether is present within the range of 0.1-10 wt % of the photosensitive resin composition.

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c. With respect to claims 15-18, the substrate is subjected to surface treatment including ball polishing (polishing processing) and sand blasting (blast processing) as claimed in claim 16 of present application ([0144]). Because the substrate of ISHIKUZE et al. meets the limitations of the substrate as claimed in present application and claims 15-18 use product by process language and intended use language including "obtained by", "detected and quantitatively determined using", "by applying", "by application of", and "which can be engraved using" the claims (15-18) are unpatentable. Patentability of a product does not depend on its method of production. (MPEP 2113)

d. With respect to claim 20, the substrate of ISHIKUZE et al. is a planographic printing plate (letterpress printing original plate) having an image formed by exposing the photosensitive layer to light (laser engraving process).

### ***Conclusion***

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to JUAN E. VAUGHAN II whose telephone number is (571)270-5125. The examiner can normally be reached on Monday - Friday 8AM-5PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia H. Kelly can be reached on (571)272-1526. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JEV II

/Cynthia H Kelly/  
Supervisory Patent Examiner, Art Unit 1795